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ABSTRACT

The second year of the Kentucky, Ohio, Michigan Regional Medical Library (KOMRL) might be characterized as one in which there was operational stability, but continuous confusion of purpose and direction. Although the administrative structure remained unaltered and the number of papers produced and the meetings held were considerable, the program was handicapped by a lack of funding in meeting its proposed objectives. The objectives, procedures and quality of service may not continue to be a satisfactory base from which to operate in providing the optimum service to meet the needs of the biomedical community. An attempt is made to bring out facts, opinions and assessments on the possible functions and directions for a regional medical library which is to consider health resources as a national problem and to meet its user needs. (AB)

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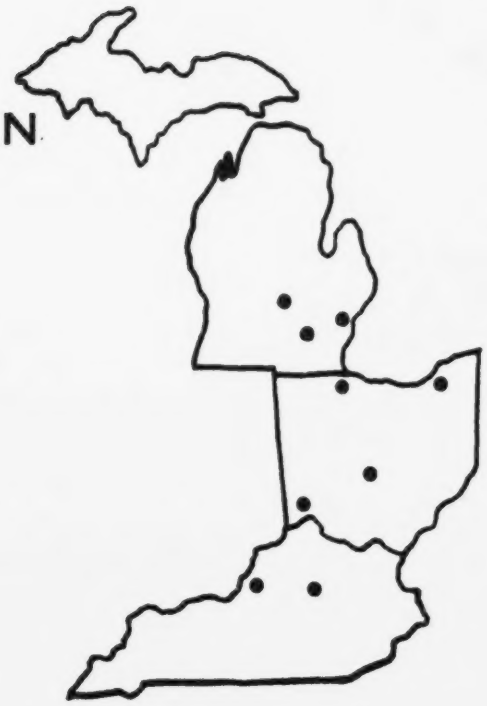

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Interlibrary Cooperation, A Second Year Review of the Kentucky, Ohio, Michigan Regional Medical Library Program*

by
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Detroit
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The second year of KOMRML might be characterized as one in which there was operational stability, but one in which there was continuous confusion of purpose and direction. For this reason this report is divided into two sections, the first deals with the operational events and accomplishments, the second section is an attempt to bring out facts, opinions, and assessments on the possible functions and directions for a regional medical library.

PART I

OPERATIONAL REPORT

The administrative structure has remained unaltered during the year. The membership of the Executive Committee has had only two resignations with no changes in the Administrative Subcommittee. The same methods of communication have been used as in the previous year. This apparent stability should not be interpreted as a do-nothing administration. The sheer bulk of paper produced and the number of meetings held belie any such accusation. During the year,

(i) 39 Executive Committee Memos were distributed,

(ii) 21 Administrative Memos were distributed,

(iii) 3 Executive Committee meetings were held,

(iv) 3 Administrative Committee meetings were convened,

(v) 2 Executive Subcommittees were appointed,

(vi) 7 Working Papers were produced,

(vii) 2 NLM Site Visits were endured,

(viii) 4 KOMRML Papers and Reports were produced,

(ix) 1 Supplemental Grant Application was prepared and submitted, and

(x) 1 Continuation Application was prepared and submitted.

With all this investment of time, only a small share of which was supported by federal funds, it would seem that many accomplishments, or at least tangible plans for future activity, should be reported. Except for the KOMRML Union List of Serials, no new program was started during the year, nor is any new one to be started in 1971. A justification, or in some measure a rationalization, for this administrative wheel spinning would seem to be in order.

Planning and administration

When the original grant for KOMRML was made, the award was, comparatively speaking, the lowest given any RML. It was assumed that supplemental awards would be made as KOMRML's program was able to absorb more work. An application submitted in 1969 was reviewed in 1970 and disapproved. This required KOMRML to reassess its program -- how could it create viable services which were equivalent to those given in other regions? A second application was prepared which in turn was administratively withdrawn by NLM. The second proposal was never evaluated for its merit or applicability for KOMRML because administrative changes at NLM were made with a new operational policy formulated. Optimists would say the exercise of thinking and planning was good for KOMRML -- it aided in solidifying goals and aims. The pessimist might point out that the intellectual activity involved in planning and preparing received no direction or at least evaluation for its own merit -- the exercise was a futile one dissipating resources and talent that could have been channeled elsewhere.

A second time-consuming shift in planning and execution was the production of the regional union list. NLM decided that the national RML program would create a national data bank of serials capitalizing on the data bank already existing in the Union Catalog of Medical Periodicals. Although KOMRML will probably have a union list compiled sooner than if it had followed its original plan, it nevertheless took administrative time to change the method of creating the list.

There should be no doubt in anyone's mind who was involved with the development of KOMRML during the first half of 1970 that the Director had become paranoiac about his failure to communicate the needs of KOMRML to the federal funding agency, NLM. There appeared to be no other choice, for the good of the program, than to search for a new Director. This kind of situation for a new program is not conducive for coherent progress. A subcommittee of the Executive Committee spent four months searching for a candidate. By October, when possible candidates were identified, the whole program had so changed in scope and the future funding of the RML program as a whole became so doubtful that it did not appear possible that any qualified candidate would accept such a position without assurance of its continuance. At the end of the year, the same staff exists as at the beginning of the year. KOMRML had to cope during the year with a time consuming and administratively delicate situation that took the energy of many individuals. How more fruitful if this effort could have been channeled to constructive ends rather than a flurry of activity to maintain a status quo.

Library service development

Although KOMRML as a central agency may have been thwarted during the past in establishing new programs, this has not been the case with participating libraries. What may have been identified as a trend a decade ago has now become a necessity for our health institutions --

the recognition of interdependence of function. Scientists have always recognized the need for free exchange of information. The technologist and applied scientist have not always developed information service in their institutional milieu as an essential part of its formal structure. Centralization and isolation are no longer a feasible means to ensure an identify of excellence. Whatever the cause is for the call to action, availability of federal funds, enlightened self-interest, altruism -- participating libraries are taking leadership to improve their own organization as well as others. Although this activity is not sponsored by KOMRML in any direct fashion, all undertakings are consistent with KOMRML's overall programs.

The most comprehensive activity is that started in the Ohio Valley Regional Medical Program (OVRMP). An IN-WATTS line was installed at UK in connection with the Drug Information Center. Individuals and institutions can call UK library for documents and reference services. A visit has been made to nearly all health care institutions in OVRMP to evaluate library services. The personnel for this undertaking are centered at UL and UC (See KOMRML Papers and Reports No. 4). A similar "consultation-evaluation" service is provided from CHSL. MCOT has spent considerable effort to plan for a continuing education program for hospital librarians which will relate not only to its own service area, but will extend the work done at OVRMP and at CHSL.

Organizations of health science librarians have been in existence at Cleveland, Detroit, and Toledo for some years (See KOMRML Papers and Reports No. 8*). A similar such organization has been started at Louisville. These groups have been organized to aid their members in keeping informed of library activity; workshops and seminars have been supported by these groups as well as informative meetings. One unusual accomplishment is that of the Detroit group. An agreement was signed by over 50 institutions which, although not legally binding, recognizes the need for mutual responsibility for the provision of library services and has caused a formal body to be created to evaluate and to monitor the interlibrary loan activity of these signatories. (See KOMRML Papers and Reports No. 7)

Large investigative projects are not possible to support from RMP, KOMRML, or from the budgets of the participating libraries, nevertheless, investigative work is being carried out at four of the participating libraries. The University of Detroit (UD) is determining the scope and extent of the literature of dentistry through a citation study; WSU is continuing its study on services provided through hospital health science libraries and aiding the local librarianship group to evaluate and to monitor interlibrary loan flow; UL is investigating the requirements for hospital health science library service; UK has begun a study to evaluate the use of its IN-WATTS line service.

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* Full citations given for references at end of report.

The impression that many biomedical librarians have is that only resource libraries have the facilities and the propensity to engage in extramural work. In preparation for the change from grant funding to contract funding, KOMRML asked all institutions who made more than 250 requests for documents through KOMRML how many items they in turn had lent to other health related institutions. Using only the data

Table 1

Number of Items Lent in 1970 by Institutions
Other than KOMRML Participating Libraries

Type of Institution	Number of Items Lent
Hospitals	6135
Foundations/Institutes	1067
Industry/Commerce	347
Educational	1074
Total	8623

received from the limited number of institutions in KOM it is clear that at least 15% of the interlibrary loan lending within KOM is done by other than participating libraries (See Table 1)*. Of the 45 institutions borrowing more than 250 items, 37 or 75% of them lent materials. (See Table II in Appendix) Comparative figures are not available, but it is clear that there has been a growth in the number of items many of these institutions have lent. Perhaps a significant cause for this activity has been the establishment of a quota system at the participating library level. KOMRML must recognize the contributions these institutions are making.

Publicity

During the year three communications were sent to institutions who had used KOMRML services. The first was a letter informing each institution how many ILL transactions had been recorded as being processed through participating libraries (Figure 1, Appendix). The second was a questionnaire asking for comments on KOMRML document delivery service and what additional services might be instituted. The third communication was sent in December announcing that new quotas for document delivery services were to be established for 1971. Other publicity for KOMRML was also carried out by participating libraries to the institutions and individuals in their areas. As will be reported below, more loans were

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* Tables of 1970 data which are comparable to data collected in 1968 and 1969 are included in the Appendix. Only illustrative data from these "sets" of data will be used in the text. For complete data, see KOMRML Papers and Reports No. 1 and No. 5.

transacted and more institutions have "joined" the system. Whether this can be related to the KOMRML and participating library publicity activity cannot be assessed.

Document delivery service

At the end of 1969 doubt was expressed whether the bureaucratic system which required all institutions to relate to one of the participating libraries was viable and whether it would result in improved accessibility to biomedical literature. Data are presented below which indicates that the KOMRML's document delivery service has expanded and is improving. The one other measure available on the adequacy of the service is the result of a questionnaire mailed to all those institutions who had made requests to KOMRML in 1969. The results of the questionnaire were published in KOMRML Papers and Reports No. 6; it should be noted that very few institutions reported that the KOMRML arrangement was slower than before the system was established. Most important perhaps is the high percentage of institutions which reported that they would be willing to pay for the referral service established.

Librarians often have to judge the efficacy of their libraries by the lack of complaints rather than from testimonials. In this regard, the KOMRML Central Office received no direct communication, nor were any referred, with a complaint about the document delivery service.

Although it is not a precise measure, a service that continues to increase gives some indication that it is needed. As can be seen from Table 2, a 48% increase in requests has been experienced by KOMRML during

Table 2

Increase of ILL Transactions

Processed by KOMRML 1968 - 1970

Year	Number of Transactions	% Increase Over Previous Year	% Increase 1970 Over 1968
1968	33450*		
1969	44058	24	
1970	63559	31	48

its two year period of operation. This in spite of the fact that quotas of "free" service had been established. Almost 16% of the requests received were over the 1970 quota of 400 requests per institution. Interestingly, when the new quota system goes into effect, that is, 250 requests plus the number of items lent per year, because of the activity of so many borrowing

* Estimated

institutions in lending, the number of transactions to be supported by KOMRML will have to be increased. (See Table II Appendix) One of the concerns in the past with the RML document delivery program is that those institutions which could afford to pay for facsimile copy were being overly subsidized from federal sources. The quota system has reduced this subsidy considerably. Although the specific efforts of promotion on the local and national level cannot be assessed, it is obvious in KOMRML that many more institutions are using the document delivery service. This increase cannot be caused by a settling down of routines because these routines were already well established in 1969. The number of institutions using KOMRML in each category (Table 3) has increased. In absolute numbers, the hospital group has grown phenomenally -- almost three times as many as in 1969. To summarize these data, one might conclude that since 67% of the document delivery service is to hospitals and that 43% of the hospitals of the region (compared to 15% in 1968) have made requests, the KOMRML service is providing information to support health care and education to a greater extent than research, which is a goal of the RML program.

This change in institutional population served through KOMRML brings up such a new set of variables that statements on the difference and similarities that can be observed on participating library activity between 1969 and 1970 are conjectural at best. One marked change has been the shift in relative load of processing transactions (Table 5). Increases were experienced by all but WSU; some participating libraries have more than doubled the number of requests processed. Since there is the least change in the two largest metropolitan areas, Cleveland and Detroit, one might conclude that access to the scholarly record is indeed being equalized throughout the region. Individuals and institutions outside metropolitan areas will soon arrive at the same level of use of KOMRML participating libraries as those within metropolitan areas.

The change in the ability to supply requests, except for UK, has altered but slightly (Table 6). One reason that might be given for the increase in UK's fill rate is the installation of its IN-WATTS line and the taking on of a new group of clientele that is almost entirely clinically oriented but for which its resources are adequate. Two participating libraries have not been able to reach a 70% fill rate over the past two years. Clearly, some study should be given to the reason for this situation to reduce the switching station function of these two libraries. Service could be improved if some of these transactions could be sent directly to libraries which do own the items requested, as well as reduce the cost of processing these requests. Another bit of evidence that the document delivery service has improved lies in the figures which show a doubling of the number of unfilled requests that were referred in 1970 over 1969. Several reasons for this might be given. First, the community better understands the service. Second, requesters are submitting requests with sufficient accuracy to make it possible for participating libraries to refer a greater proportion of unfilled requests without undertaking the task of time consuming verification and identification of location of titles. Viewed in another way, this might be a

Table 3

Institutions Using KOMRML Services

In 1969 and 1970

Type of Institution	Number Identified in KOMRML	Percent of Total	Number of Institutions Using KOMRML in 1968	Number of Institutions Using KOMRML in 1969	Percent of Total Institutions	Percent of Institutions Using KOMRML Services	Number of Institutions Using KOMRML in 1970	Percent of Total Institutions	Percent of Institutions Using KOMRML Service	Percent Change in 1969/1970	Percent Change in 1968/1970
Hospitals/Clinics	670	62	102	196	18	43	252	27	47	31	64
Industry/Commerce	126	12	33	91	9	20	94	10	18	15	69
Government	35	3	14	31	3	6	34	4	7	24	66
Educational	197	18	35	100	9	22	125	11	20	16	71
Foundations	15	2	4	9	1	2	6	1	1	-	44
Professional Societies	4	<1	4	4	<1	1	3	<1	1	-	-
Public Libraries/Museums	25	2	4	27	2	6	33	5	7	40	60
Total	1072		206	458			547				

Table 4

Comparison of use of KOMRML

Document Delivery Service, 1968 - 1969**

Type of Institution	1968* %	1969 %	1970 %
Hospitals/Clinics	67	62	67
Industry/Commerce	9	15	11
Governmental	6	7	5
Educational	12	12	9
Foundations	3	3	2
Professional Socities	3	1	<1
Public Libraries/Museums	<1	<1	<1
Individuals	-	<1	3

* Estimate

** Base of calculation does not include requests originating from participating libraries and from institutions outside KOM

Table 5

Distribution of Document Delivery Service Among Participating Libraries 1969 & 1970

Participating Library	No. of Transactions Processed 1969	% of Total	No. of Transactions Processed 1970	% of Total	% Increase Over 1969
WSU	19215	41	19038	30	-
MSU	2016	4	4454	7	55
UM	3919	8	5532	9	29
UD	248	< 1	363	< 1	32
MCOT	607	1	1723	3	65
CHSL	10344	22	11595	18	11
OSU	3150	7	5361	8	41
UC	1720	4	4286	7	60
UL	1949	5	3981	6	51
UK	3446	7	7226	11	52
Total	46614		63559		

measure of better informed and more skillful librarians throughout the region. All but two participating libraries have increased their referral rate (Columns 5 and 6, Table 6). All but one (CHSL) have referred 55% of their unfilled requests. What the conditions are in CHSL's service area which causes this low referral rate undoubtedly needs study. Because the difference is so large one has to question whether other participating libraries are too liberal in referring requests or whether there are operational factors which are preventing referrals being made from CHSL.

Marked changes also occurred in the distribution pattern of referrals (Table 7). The pattern of referrals for hospitals and educational institutions has altered. The proportionate increase in the number of referrals for hospitals is probably the result of more requests being submitted with an accuracy that make them suitable for referring. Although there is no proportionate decrease in the amount of work done by KOMRML for educational institutions, it has increased in absolute numbers (Table 4). The increased referral rate for this group is probably due to an increased knowledge of how to exploit KOMRML.

One of the necessities of a system is the standardization of operations (See Part II below). Two minor checks available on KOMRML's ability to arrive at standard procedures is the number of exposures per filled facsimile request and the cost of supplying administrative data. (Tables 8 & 9) The average number of exposures per filled request ranges from 5.8 to 9.3. The reasons for these variations may be due to a lack of a standard policy of an upper limit for the number of exposures that will be supplied after which the original will be sent. Another factor may be the type of machine used. In any event, since the grant payments are based on number of exposures, this can become an expensive factor in the amount of service that can be supported from this source. The cost to record administrative data ranges from a low of $0.026 to a high of $0.656 per item. Obviously, standardization of record keeping has been far from attained.

More administrative data could be collected on KOMRML's operation, but it is clear that marked changes are occurring and the data already available provides clues as to what should require further investigation. Not all aspects can be investigated; some priority decisions will have to be made. To increase the cost of data collection without a definite direction for evaluation would be a mere exercise in data collection without time for analysis.

Table 6

Comparison of Filled and Referral Rate by
Participating Libraries Between 1969 and 1970

Participating Library	% Filled 1969 (1)	% Filled 1970 (2)	% Referred 1969 (3)	% Referred 1970 (4)	Ratio of % Unfilled to % Referred 1969 (5)	Ratio of % Unfilled to % Referred 1970 (6)
WSU	82	81	8	11	0.42	0.58
MSU	83	75	14	21	0.82	0.84
UM	79	82	17	15	0.81	0.83
UD	81	83	10	11	0.53	0.65
OSU	71	71	16	21	0.55	0.72
CHSL	75	77	1	6	0.04	0.26
UC	56	60	39	32	0.88	0.80
MCOT	26	35	59	57	0.80	0.88
UL	84	80	11	13	0.69	0.65
UK	76	87	7	7	0.29	0.54
Total	77	76	10	20		

Table 7

Use of Referral Service

By Different Categories of Users

	1969			1970		
	Total Requests Referred*	% of Total Referrals	Ratio of Referral Requests to Total Requests Received**	Total Requests Referred*	% of Total Requests	Ratio of Referral Requests to Total Requests Received**
Hospitals	1739	35	.07	3685	52	.11
Industrial/Commerce	1024	21	.18	1165	17	.21
Governmental	417	9	.16	603	9	.26
Educational	465	10	.20	1205	17	.26
Foundations	123	3	.12	221	3	.20
Public Libraries	7	<1	.04	19	<1	.09
Professional Societies	93	2	.06	118	2	.36
Individuals	2	<1	<.01	25	<1	<.01
Total	3870			7041		

* Excludes requests originating from participating libraries and re-referrals

** Base used excludes requests originating from participating libraries or outside KOMRML area

Table 8

Average Number of Exposures for
Requests Filled by Facsimile Copy, 1970

	No. of Facsimile Requests	No. of Exposures	Average Exposure per Request
WSU	14,374	104,975	7.3
UM	4,188	24,509	5.8
MSU	2,984	19,739	6.6
UD	289	1,378	4.8
CHSL	2,300	14,997	6.5
MCOT	698	6,514	9.3
OSU	2,979	23,552	7.9
UC	257	1,564	6.1
UL	2,388	17,555	7.6
UK	6,345	45,153	7.1
	36,802	259,936	7.1

Table 9

Cost of Providing Activity Data

	Personnel Costs for ILL Reporting	Number Requests Reported	Cost per Request
WSU	-- *		
MSU	113.75	4454	$0.026
UM	1554.65	5532	0.281
UD	238.00	363	0.656
MCOT	-- **		
CHSL	337.72	11595	0.029
OSU	256.52	5361	0.048
UC	762.50	4286	0.178
UL	213.00	3981	0.054
UK	217.70	7226	0.030

* Included as part of duies of Central Office Staff and counted as a separate procedure.

** None Reported

PART II

LIBRARY COOPERATION

Directions for KOMRML

Our urban culture is challenged daily by a breakdown in community services because (i) of deliberate action by those providing the service (strikes, policy changes), (ii) the organization providing the service cannot keep up with the demand caused by a growth in need for service or poor deployment of resources to provide the service, or (iii) of failure to create an organization through which community needs can be satisfied. Library service to a community is subject to all of these breakdowns.

Whenever federal funds are used to support or to augment any social service, one can assume that the service is of national importance and is accountable to our nation as a whole. Because of the existence of the Medical Library Assistance Act one of the tasks confronting all medical libraries is to create and to maintain a dependable library organization. There are difficulties associated with obtaining a balance between minimal acceptable levels of quality of service and the maximum resources that can be allocated to library service. Since resources are not inexhaustible, someone has to make decisions on priorities and just as important, somewhere there have to be "gatekeepers" restricting the rates of utilization of services. Whether such decisions are made at the highest government levels or whether they are left to a laissez-faire "ability to pay" on an individual level will depend upon a combination of national political viewpoints and historical factors. The basis for accountability rests on values arising from our cultural experiences. Our nation has not resolved the problem involved with matching the "wants" and "requirements" of consumers of library service (or for that matter for health care, education, pollution control, etc.) with the "needs" as defined by professional assessors and planners with the "resources" that are available.

CONSUMER WANTS ✳ PROFESSIONAL ASSESSMENT OF NEED ✳ NATIONAL RESOURCES

The first part of this report has dealt with what KOMRML has done in the past year. Arguments could be put forward that KOMRML has, in the collective judgment of the professional librarians involved, obtained the optimum service possible to health professionals with the resources available. Even if conclusions of the arguments were demonstrated as irrevocably true, KOMRML still faces a future that is undergoing change in all areas of the health industry. The objectives, procedures, and quality of service provided in 1970-71 may not continue to be a satisfactory base from which to operate.

Many perspectives might be used from which to direct the attention for future growth of KOMRML and RMLs in general; the discussion here will concentrate on the professional assessment of information needs of health professionals and on the possible deployment of resources by concentrating on,

1. The organization of our national health care system,

2. The institutionalization of information services through libraries,

3. The kinds of interlibrary services that have been attempted by other than medical libraries, and

4. An assessment of services that might be possible to develop with a medical library system.

General assumptions

Some medical libraries in the nation have asserted that they have acted as "regional" libraries long before the Medical Library Assistance Act was passed. This argument undoubtedly has some validity because agencies are not created from pure imagination -- some functional precedent had to be available to convince Congress of the validity of the concept of RMLs. Whatever the writers of the original legislation may have conceived the overall purpose of RMLs to be, it has become very evident during the past five years that Congress wishes to have federal funds expended to improve health care to the nation. An RML may support educational and research activities, but ultimately the continued existence of RMLs will depend on their relationship to the delivery of health care.

Librarians, as other people who must work through institutions to make their contribution to society, have a tendency to accept the cliché as a fact that a library is the "heart" of any scholastic enterprise; destroy the library and you destroy scholarship. This vital organ analogy has flaws. Obviously, there are many within a scholarly community, particularly in the applied sciences, who have little contact with libraries as institutions: the removal (or the absence) of the library "heart" does not cause an immediate collapse of scholarship. The vital organ analogy can be used in another way. No matter how strong and healthy a heart may be, it can only maintain an organism if all the other vital organs are also functioning. A library can only contribute to scholarship if all other institutional means are functioning. Allowing a library to atrophy will have the consequences that those who need library service will do without or search for a more expensive substitute. Librarians will rarely admit that any library is suffering from hypertrophy, but there are indeed libraries over-stocked, larded with useless material that is beyond the needs of the institution supporting them. A library is part of a complex and can function only in relationship to other parts of the complex -- it is not necessarily a primary institution, but it can not be relegated to a role that can be excised if it is suffering from some malfunction.

The etymology of the word "library" refers to a storage place for books. This function has to be continued but consumer demands require a library to be more. First, access to the information stored must be more active than the user coming to a store house. The health professional must be provided with a social service that involves at least the distribution of documents. Further, the formats in which information are now stored have expanded. Whether a library as an agency, or a unit within an institution, undertakes the total task of distribution of informational materials is perhaps of less importance at present than that a formalized and institutional system be created for access to information.

Because of the increased complexity of the institutionalization of health care, it is almost impossible to provide adequate service in all areas, including library service, if based solely on local initiative and local resources. Until the technology is generally available which will decrease further the constraints caused by distance, an organization must develop which will permit an interdependent relationship. The fundamental argument for the development of a library network or system is that in union, or cooperation, there is strength. If systems are to surmount the conditions which are causing them to be created, they must be of sufficient size, scope, and strength to display the advantages of cooperation. The consumer must be offered an improved, if not a new, level of library service.

The health care system

Sigerist has asserted that health care is essentially a social relationship, "In every medical action there are always two parties involved, the physician and the patient, or in a broader sense, the medical corps and society". (Sigerist, p.26) The interaction of two or more persons, centering around the health needs of a single individual, is far from a spontaneous happening. As noted above, the health care system at any point of time in any nation, and even within a geographic area of a nation, is a product of tradition and current political philosophy. Health care systems operating in other nations show wide variations in the institutional organizations to permit the confrontation of the participants of any medical action. Because the U.S. health care system is not definable into straight lines and squares as it is in, for example, Russia, does not mean that the U.S. has no system. The organization of our medical facilities, like all organizations providing goods or services in the U.S., exhibit the almost contradictory features of increasing complexity and increasing rationality.

> Their complexity stems from the greater accretions of medical knowledge and technique that engender an ever finer division of labor; too, medical institutions are subject to so many demands and expectations that they are, by definition, multiple in character. Their rationality, in turn, is a product of the imperatives of complex organizations for planning and control as well as the heightened imperative of economic accountability. (Wilson, p.47)

To bring rationality into the planning of medical library services some understanding of how the various aspects of our total health care facilities relate to each other would appear to be essential. There is no way that the U. S. health care system can be described simply. Figure 1 is an effort to show where the individual, or a community, encounters medical actions within the system. It is at this point where decisions begin to be made and knowledge applied to problem solving. Any "system" that purports to deliver information to health professionals must do so at these points, or at least show a possible avenue through which information can be delivered. Figure 1 does not take into account the "decision" making in educational and research organizations. To simplify the following discussion it is assumed that if facilities are available to provide service to professionals involved with health care, the educational and research interests can also be handled.

The philosophy of free choice of physicians and fee for service has shaped our health delivery system and requires that a tremendous investment in information transfer be maintained. By tracing the possibilities an individual has when he decides that it is necessary for him to seek the aid of a physician, one can see why the need for this information transfer is necessary.

1. Theoretically, an individual can hire any physician anywhere; the only practical limits are those due (i) to distance, (ii) the availability of the physician's time, (iii) the availability of money to pay the physician.

2. In many areas of the nation an individual can enter the health system through an institution, an outpatient clinic, emergency room, etc.

3. Certain health care procedures are socially organized so that the individual does not make a decision whether he wants the service or not, e.g., F.D.A, sanitation services, but must act collectively through governmental organizations.

As already indicated in the quotation from Wilson, our health care system has undergone changes in organization to accommodate the rapid growth of knowledge needed for solving health problems.

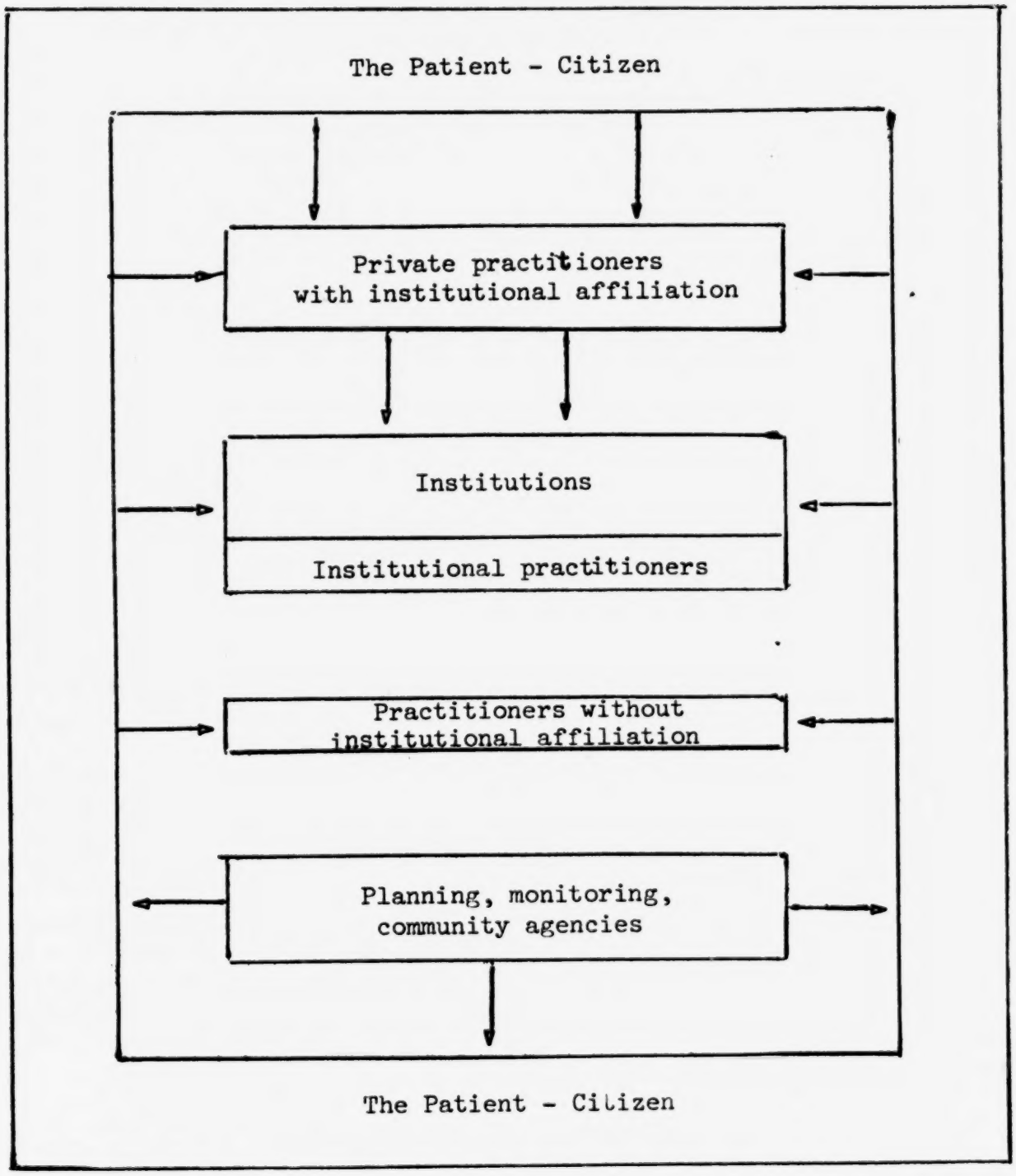
1. The educational process has been extended and intensified in all health professional groups.

2. Specialization has occurred in nearly all areas of the health professions.

3. Professionals have associated themselves with institutions to provide an environment (i) which allows for the collection of expertise and equipment to provide good health care and (ii) which gives the professional an organization through which he can continue his education.

Figure 1

The confrontation
of the individual with
health professionals



Because of the one-to-one relationship under the philosophy of free choice of physicians, the individual seeking health care expects that all the knowledge and skills needed to solve his problem are always available whenever he enters the health care system. (i) The physician (dentist, optometrist, etc.) of first contact must either be able to solve the individual's problem or know if, when, and to whom he should be referred; this means the physician must, in a sense, comprehend what he cannot solve and also be aware of how to get the individual to specialists or institutions who do have the knowledge and facilities. (ii) Should an individual elect to go to, or be sent to, a specialist for care, this specialist must be sensitive to all his health problems; that is, the specialist must know his limitations in caring for the "whole person" and be prepared to refer the individual as the physician of first contact. (iii) If an individual has had specialized or intensive care, he may return to his physician of first contact who must, if he is to provide continuing care, understand the nature and results of the treatment the individual received. Good health care requires informed health professionals. Although experience and oral communication are the basis for the transmission of a large share of medical knowledge, contributions and access to the scholarly record play a fundamental role in communication of knowledge. Quantitatively, the scholarly record is so large and is continually being added to that further institutionalization of its access must be developed.

Need for library networks or systems

In our wealthy nation with a philosophy of free enterprise, self-help and self-responsibility for medical care, a high quality of medical care is available to those who are able to pay for it. The challenge is how to make medical care available to all who need it. To meet this challenge we, as a nation, face the difficulty of redeploying our resources to meet the needs of the whole population. Changes in our institutions are necessary, but we are not certain how the health professionals, the government agencies, and the public will react to the changes that can be effected. (Fry, p.53) The task of providing a means to have the scholarly public record accessible through library organization so that health professionals can translate the public record into personal knowledge faces many constraints.

Under the present health care system, it would appear mandatory that all health professionals must have access to the entire scholarly record at all times. Operationally, this is not now possible, nor has it ever been. To abandon this objective would require one (or both) of two alternatives: (i) deny a need for access to the scholarly record; that is, those who do have library service have an adequate service and those who do not have access to a library do not need a library to function as professionals, or (ii) develop an organizational system which defines the moral and legal responsibility for the use of knowledge. While it can be argued that with the proliferation of specialization and the creation of many paraprofessionals a division of responsibility is developing, the present state of professionalism cannot be used as a basis for planning library service. First, the role of an individual can shift, even within

the same day, from practitioner, educator, to researcher within one institution or within several. Further, the distribution of health professionals does not fit any pattern -- not only is there variation geographically but from one institution to another. Were health professionals assigned responsibilities and then distributed throughout the nation as in Russia, "core collections" of the scholarly record could be organized and distributed for access according to the hierarchial arrangement. Perhaps one reason for the dissatisfaction for the core library concept in the United States for health professionals is that few of us would accept health care which is based on a limited part of the scholarly record. In any event, those who have the responsibility to maintain library service for the health professional do not have the authority to deny library service nor to define what part of the scholarly record should be made available to which individual according to any functional professional division. There does not seem to be any possible alternative except to continue to work toward the objective to provide access to the entire scholarly record to all health professionals.

The pattern of the development of libraries within the United States arose because of several limitations.

> Library service...was based on a relative immobility of users and of materials and on a political system that looked to local sources of support for social services of all kinds. Travel was slow, difficult, and expensive, with the result that users were confined to institutions -- whether churches, schools, libraries, or hospitals -- nearest at hand.... The physical movement of materials was also difficult. The mails were slow, unreliable, and expensive. Books were scarcer and relatively far more expensive than today and hence were risked on interlibrary loan only reluctantly, if at all.... The consequence of this double immobility was that potential library users were necessarily confined to the materials available in institutions near at hand. There simply did not exist the technological basis for a library system that would have made any collection of materials realistically available to a body of users widely dispersed or that conversely, could have made materials in a geographically dispersed series of collections accessible to a single user. Nor would the institutional and fiscal patterns of the country have provided support for such a system, except for such institutions as prisons, asylums, and universities, of which only one or two were needed to serve a state. Social and educational institutions were considered not a national or even a state responsibility, but a local responsibility. It was up to each community to

> provide its own schools and its own library, and the funds that supported them came from local taxes and were confined to local ends.
>
> A consequence of this triple series of limitations was that the possibility of even reasonably adequate library service was directly related to population density. (Lacy, 1968)

The mobility of users has improved, the introduction of facsimile techniques has made mailing easier and less expensive, but this still does not "solve" access problems. First, there is probably little dissatisfaction expressed with the services provided by health science libraries no matter how small and self-contained, but rather at the absence of libraries. Discussions of the availability of library service to health professionals often assumes that it is rural areas where no libraries are available. The same is true in urban areas. A study in metropolitan Detroit done in 1967-68 shows that 40% of the M.D.'s and 60% of the D.O.'s do not have access to a library. Other health professionals have even less access. This leads to a second problem area. Libraries are "institutions" that must have a physical identity to function. What libraries work with are documents. If health professionals want information, they can call a specialist -- they do not, or should not, call a librarian for information on which to make decisions. Theoretically, all knowledge needed to support our civilization is known collectively, but it may be impossible or impractical to find the individuals who have the knowledge needed. Libraries have the function to provide the documents which contain the knowledge needed. Ultimately, a library must deliver documents to users. The computer has been proposed as an instrument which can remove the need for the physical institution, the library. However, within the foreseeable future the quality of the technology of computer storage is likely to be practical for only small collections of intensively used materials. This is precisely the kind of material that is quite practical to collect for a "traditional" library. Furthermore, a "core collection" has the same limits, as discussed above, whether it is stored in print or electronically in digital form in a computer.

Academic libraries have a long history of cooperation; these arrangements give the leisurely scholar an opportunity to use the nation's library resources, but this cooperation does not, and cannot, enlarge the daily flow of service within the ordinary library. In fact, the operating code for the sharing of documents among libraries still defines the service as a privilege. Further, it is the responsibility of the institution to own the materials needed to support formal education. The assumption is that educational programs extend through time and are systematized into segments for which core collections can be defined. Scholarship is not so confined because it has less time constraint, or at least the scholar can adjust his studying to accommodate imprecision in his privileged services. Document delivery services to be useful for the support of health care does have time constraints -- the information must be provided within the threshold of patient discomfort or within his life time. Continuing education of health professionals cannot be segmented as with formal education because it deals with the new and the unusual.

In summary, there does not appear, with the present organization of our health care system, a means to limit access to the scholarly record by any functional division. Access to library stored documents requires a user contact an institution. Even though a "trend" is evident that health professionals are increasingly institutionally based, because of the philosophy of solo practice in our nation many professionals have no recourse to a library. If the Detroit data can be generalized, lack of library service is not confined to areas of low population density. From the data collected by KOMRML (i) it is clear that there are very few libraries serving health professionals which have not sought help in obtaining documents from other libraries and (ii) no resource library of KOMRML has sufficient document resource to satisfy its area's needs or its own primary clientele. One answer to the problem of library access has been to provide federal funds to supplement local sources of support through the Medical Library Assistance Act. But, without some increase in the mobility of users and materials, even a substantial subsidy cannot guarantee adequate service for "deprived" health professionals nor can existing resource libraries continue to expand their services without changing their traditional objectives and responsibilities. Access to the scholarly record cannot be assured from local resources; it is of national concern. Developing library networks or systems through regionalization has become an accepted approach, but regionalization may merely be an extension of inadequate library service. A popular idea is maintained by missionary zeal and emotional conviction. While these attitudes must prevail if change is to be effected, any action taken for improvement must be answerable to our social and political traditions and be related to the resources available, and not just to professional convictions.

Existing library systems

A communication network properly made is harmonious and symmetrical, of equal strength at all places; a strongly connected component in a network is one in which all nodes are mutually reachable; that is, there is at least one path, in each direction, between every pair of members of a strong component. (Allen, 1970)

> A telephone system is, in this sense, quite acceptable defined as a network, because each entry point to the system has the same potential as any other and any two stations can be connected for the purpose of exchanging information. A municipal library system does not work this way. It more nearly resembles a radial plan in which all the information is transmitted between the outlying points and the central library. There is little programmed transfer of information between the branch libraries, although informally branch libraries may be in touch with each other. Gossip, for example, is readily moved about in branch libraries, sometimes avoiding the central library altogether -- but this I repeat is informal and not systematized. (Gaines, 1968)

Librarians, as administrators and managers of a social institution, acquire their values from the same sources as do other individuals in our society. The need for libraries to share and to combine resources has been recognized for many generations. As administrators, each librarian must protect his institution and the approach used in past generations has been that grouped under the word "cooperation". This attitude of cooperation has been most strongly promoted in resource-research libraries with the intellectual leadership coming from academic libraries and our large federal libraries. The list of cooperative efforts that have been undertaken has an impressive quality to it. (Lehman, 1969; Purdy, 1968)

Cooperation among institutions does not make a <u>system</u> or a network no matter how starry-eyed the promoter of a project may be. The tendency has been to design schemes of cooperation and assume the design itself has an intrinsic value. In these times of deification of innovation, it seems almost irreverent to ask whether an "innovative" program may fail or succeed -- or even ask what its purpose is.

> There is much current concern with impending networks as a consequence of automation and computerized transfer of information and data. Everyone speaks of networks but no one knows what they are. There are questions of geographic, functional and other relationships as well as issues concerning roles, responsibilities with respect to network operations and organization, and the topic of initial development. (Dubester, 1970)

Public libraries have taken a different approach to "cooperation" from academic libraries. This is due, at least in part, to the realization that a library must be of a certain size before it can give effective dependable service. Since many areas of the nation do not have a population base large enough to tax to build such libraries, organizational units were created to try to undertake administratively what academic libraries have tried to maintain through a spirit of cooperation.

Nelson Associates identified 491 public library systems in 1967 of which they chose a sample of 58 to study in depth. Since public libraries get their authorization from some tax unit, many combinations of libraries were found:

1. Municipal libraries forming a unit just within a city or working with other municipalities, townships, and counties,

2. County libraries under various administrative structures working with municipalities,

3. Multi-county or regional systems where some municipal libraries were within the regional system and some without,

4. Library districts which would include sub-systems as county and municipal units,

5. State supplementary systems in which some aspect of library service was extended in varying degrees throughout a statewide area, and

6. Statewide, state governed systems that controlled or operated many different units, municipal and county.

To get these political units to work toward common ends resulted in many organizational arrangements.

1. Independent libraries gave up their governing boards and became part of one or more formerly independent libraries.

2. A new single board or authority was created for several formerly separate libraries.

3. Member libraries retained their own boards, but a central board has jurisdiction over defined system-wide programs.

4. Independent units gave up their boards for state operated programs.

Although some differences were noted by Nelson Associates between the consolidated and the federated systems, neither administrative approach guarantees continued participation or efficient operation.

Public libraries have combined into new units to provide community services, but as Gaines has remarked,

> The public library movement has singularly failed to call attention to the fragmentation of community information services. It has assiduously promoted the cult of children's literature and the adult best-seller, while law libraries, medical libraries, business libraries have proliferated all about it, until, even now, it will be very difficult to bring together into one network within a society the information on which the adult depends. (Gaines, p.47)

We have now in our society many independent library units that have begun to reorganize themselves into systems. As Legg points out, "Although public, school, and academic librarians may have been willing to cooperate with each other, instances in which they have jointly, and formally, concerned themselves with the 'overall library program for the community' are rare in my experience...." Each group of libraries placing cooperation as an answer to some of its inadequacies shows little tendency to evaluate the efficacy of present levels of cooperation before more is encouraged, nor does it seem that one group learns much from the other in forming and operating systems.

What is KOMRML and whence from here?

One of the objectives of the RML program as defined by NLM at its inception was to develop a library network throughout the nation. Although KOMRML has always felt it has been contributing toward that objective, because of changes in policy and procedures from NLM, what direction the RML program was taking has not always been clear. Evaluation of any program requires a set of objectives or standards from which to make judgments. These objectives have not been forthcoming from federal offices. KOMRML may feel it is fulfilling its own objectives, but these objectives may not be useful or appropriate for a national program. In some of the published work on library networks measurement criteria have been proposed. Using an eclectic approach several of these have been selected to apply against KOMRML. Since the methodology of measurement itself is often vague and subjective, firm conclusions and judgments are difficult to make. What is presented here is the Director's opinion, which does not necessarily match the collective opinion of the KOMRML participating library directors. This is not meant as an apology; the only method which appears feasible is to state opinions as probable hypothesis which might be examined in future years.

Content of biomedical communication

Before an evaluation of KOMRML can be undertaken for planning, some idea of the content of a biomedical library network should be defined. Davis has described a model of a national biomedical communications network composed of four service components, one of which is a library or document handling component, and one network support component. While general statements of the responsibility of each of the components are made, these statements are not necessarily related to the areas she has defined as the content of biomedical communication. Further, Davis appears to have a bias toward physicians and listed the content of biomedical communication from that perspective. An effort is made to judge whether the content, as described by Davis, is a library component function to aid in the institutionalization of the communication, and if so, whether KOMRML as a federated network aids or supports the communication process.

1. Communications about patients' health status. Individual health records are unique and are privileged documents. Communications about, or the transmission of, these records has not been a library function. What often does occur is the need to interpret some part of the patient record. A library then can become useful by supplying documents containing information to aid in interpretation. The person who wants this information must contact the library about his need. There have been reports in library literature in which a service has been created to supply documents from the scholarly record that are attached to a patient's record to support educational programs, but this has not been accepted in medical libraries as a standard service. Only insofar as a request for a specific document is made to a library can KOMRML provide assistance in this communication area.

2. Communications about patients' health services. As Davis defines this area, these are administrative records relative to the delivery of health care. The handling of these records are outside the purview of a library. If the procedures in organizing, transmitting, and analyzing these records are generalized and become part of the scholarly record, these documents should be available from a library. Again, the person who wants such documents must contact a library.

3. Communications about health professions. Resource libraries certainly should collect directories and other biographical instruments on health professionals which are part of the public record, but the primary records from which these instruments are created are kept and maintained by other agencies. The identification of individuals has always been a part of library "reference" service. Perhaps because reference service has been poorly defined and covers many other aspects of providing information, no dependable "biographical" search service has been institutionalized through libraries. It would appear that a library network such as KOMRML could initiate such a service and use the same referral mechanism as for document delivery. Whether a cost-benefit could be demonstrated for the service should perhaps be investigated.

4. Communications about medical facilities. Many different agencies monitor and accredit medical facilities, associations, and societies. Libraries have not kept the primary records, but do collect the published compilations. Just as in the case of the identification of individuals, libraries could provide institutional and agency identification which could become a standard referral service by KOMRML.

5. Communications about procedures and products. Except for procedures which can only be learned through demonstration and practice and except for products which are proprietory which are "classified", most resource and many special libraries collect documents relating to products and procedures. Interestingly, although the documents are in libraries, access to them for most practitioners has required an intermediary. The need for drug information centers, of which there are

several in KOM, has arisen because of poor reference service from libraries. The compilation, identification, and dissemination of at least product information is becoming a function of the specialized information services component of Davis' model. KOMRML should not be competing with these service components, but serve as a means to supply documents for this service component when needed.

6. Communications in support of undergraduate, graduate, and continuing health professional education. As already pointed out, formal education programs should have all necessary books and journals available within the teaching institution. Continuing education and graduate education does require book and journal resources beyond what an institution owns. Interlibrary loan service obviously is an important educational support function. A new industry has been created in the production of audiovisual and computer aided instruction. Although examples can be found where the production of these teaching aids are related administratively to library operations, it is not a common arrangement. In fact, Davis describes two service components separate from library and special information services to assist in the production and dissemination of these communication forms. It does not appear that libraries have any clear cut responsibility to aid in the communication process with these materials except perhaps to provide study space for their use. Until a better definition on production, control, and dissemination is arrived at, a RML has little opportunity to institutionalize these services dependably.

7. Communication to support the health practitioner. The problems inherent in providing documents because of the organization of the health care system has been discussed above. To obtain specific documents a requester must have access to a library. Health clinicians, however, would much prefer a citation service which would first locate possible documents for them. KOMRML Papers and Reports No. 5 discussed at length the difficulties involved with providing a dependable regional citation service. The situation has not altered in the past year. The one hope is perhaps an automated retrieval system, but Davis' cost figures are discouraging to expect general adoption by the nation soon.

8. Communications to support medical researchers. Unless libraries can engage in expanded reference or specialized information services, there would not appear to be any new regional service that can be given researchers other than that which has been provided under long existing cooperative arrangements.

Using Davis' classification of the content of biomedical communication it would appear that a regionalization of libraries can only (at this time) deal with certain aspects.

1. RMLs aid in the distribution of documents which can provide information on any of the above areas. To accomplish this, distribution resources, facilities, or expertise are required which are singular, or generally of use, in libraries. The one inescapable condition for libraries as separate institutions, or as part of a regional system, is that the user must have some means of access to the library system to ask for specific documents. Without this access point there can be no document distribution service.

2. Facts about people and institutions can be supplied as a service. Again, the requester must have access to the library directly (that is, physically) or through some long distance communication device.

3. Given a description with a sufficient number of clues, a librarian should be able (i) to identify the existence of a document (verification) and (ii) to determine the existence of relevant documents from some organized collection. In general, there are only two ways a librarian can aid in this kind of communication. First, the user must be able to interact directly with the instruments of access (indexes and abstracts) and with a collection of documents. Until the means are available for users to have access remote from libraries (e.g., AIM-TWX) the user must be in a library to engage in this communication activity and he must know how the instruments and libraries are organized. The other way is that users be instructed how to state their needs within understandable limits that are relevant for search through some data base (e.g., MEDLARS) or of some collection of documents.

Since there is no way to wish away the limitations imposed by the immobility of materials, both instruments and documents, the only alternative is the development of access points for users which must have a physical identity and an administrative structure with which the user can interact. To use an old fashioned concept -- there must be libraries.

How do libraries or access points get established? What are the minimum requirements of these in terms of facilities and staff to make them suitable to satisfy the communication needs of biomedical professionals? How, in light of the institutional and fiscal patterns, do libraries function cohesively and dependably?

Factors of library cooperation

This disparate review should provide some evidence that library networks are not an established bureaucracy in our society. KOMRML is a "consortia" of academic libraries. The Office of Education has recently announced the support of a rather extensive investigation by the System Development Cooperation (SDC) "because the Higher Education Act gives benefits to academic institutions that share". Intelligent action by consortium directors and government officials cannot pertain until more information is available on their nature. SDC proposes to study the following variables and factors of interest ranked in order of priority. (Cylke)

1. Breadth and scope of the consortium's objectives and program. KOMRML's program has been simply and directly explained. As pointed out in Part I, KOMRML may judge itself as accomplishing the most it can with the resources available, but such judgment is an internal bureaucratic one. No public data, or even restricted data,are available to make comparisons among the existing RMLs. Until such information does become available, no intelligent assessment can be made of RML agencies.

2. Existence of centralized headquarters. In KOMRML's instance because of the funding arrangement a Central Office is an absolute necessity. Although the Central Office staff might argue that it cannot adequately keep up with the daily operational details forced upon it, this situation should not prevail. What the role, leadership, administrative guidance, should be of a central unit, or if it is needed at all,has not come into review.

3. Geographic distance between participants. The distance between participating libraries is unalterable. Communications and transportation do not appear to have caused problems other than the travel expense for meetings. One aspect which KOMRML has not yet adequately studied is the outreach of its services beyond metropolitan areas. Data are being gathered in several KOMRML service areas, but the task of synthesizing it and translating the information into a program of action is yet ahead of us.

4. Importance of political/jurisdictional boundaries. For the program so far developed, political and jurisdiction problems have not been a major deterent to planning nor of program implementation. As will be discussed below, KOMRML does have such problems and these may well become serious impediments to future growth.

5. Membership in multi-purpose higher education consortia. Each of the participating libraries is involved with health professional education groups besides those of its own institution. Some of these arrangements defy prose description because they developed over a long period of time with policy and procedure changes that at times are conflicting. A study of these formal and informal arrangements without some structuring, that is, an "objective" hypothesis to test, would be of little value as input to KOMRML.

6. Amount and stability of funding. The problems resulting from insecure funding for KOMRML have been discussed at great length. However, little thought has been given to funding from other than federal sources that might provide more stability to the system.

7. Homogeneity of participating libraries (size, types, funds). Differences do exist, but insofar as KOMRML's program is concerned to date, the differences are reconcilable without resulting in complex administrative deviations. As a group, the purpose of all participating libraries is the same.

8. Average size of participating libraries. Part of the reason for the functioning of KOMRML is the variation in collections. The interdependence results in a sense of sharing that appears to have been of benefit not only to participating libraries but to the region as a whole. The attitude maintained so far has been that size is not related to importance within the system.

9. Extent of automation. On a regional basis the only "automation" that can be pointed to is the union list of serials. Undoubtedly, other aspects of the operation could be automated. To accomplish automation requires stability and standardization. Outside pressures and promises have forced continuous change in procedures which prevent any sensible experimentation.

10. Stage of development. Development implies goals with a plan for implementation. KOMRML has had a plethora of goals and plans. Development in 1970 over 1969 cannot be reported as outstanding. With the change in federal administration in 1971, development will be further delayed.

11. Proximity of participants to large resource libraries. All participating libraries are part of a larger institutional system. One of the nagging problems with KOMRML's document delivery service is the question of scope. Does the relationship of the participating library with an institutional system carry with it an obligation by that institution to contribute to KOMRML?

SDC also has included in its plan for the formation of its data base information on the number of members and length of existence of consortia. Until SDC begins to gather data and arranges it for comparison, the variables identified do not provide KOMRML with any insight into its own operation nor what it might do to build a more useful consortium.

Barriers to library cooperation

The promotion of library cooperation has been a "campaign speech" of many library administrators. Probably one of the major reasons for the relative failure to establish stable interlibrary programs has been the general inability to identify a power structure through which to channel information on which decisions can be made. Uniqueness of institutional function has had to be promoted to justify support for libraries and the services they offer. One person, observing the nationwide organization of our libraries as a unit places blame on the once dominant public libraries as failing to recognize that communication of knowledge is a "seamless web" -- ignore (or destroy) a part of the web rips the whole fabric. (Gaines)

Apologists for the U.S. library system point to several accomplishments which cannot be denied as contributing to a uniformity of practice. Bibliographic standardization with the distribution of bibliographic information has been our major accomplishment. Politically, however, its success

lies more in the fact that the Library of Congress (LC) as the largest library in the world, has power merely because of its size. As the prime source of the bibliographic control of the world's documents for the nation, any decision made must be "adjusted" to by the rest of the nation. Yet, nearly every library in the nation modifies what LC does for its own collections. Counter "power groups" have been created and one of the major power sources is NLM. Its bibliographic organization is sufficiently different that individual libraries throughout the nation must make a decision which organization to follow, and unfortunately, deviate from.

The situation described is not meant to ascribe blame or fault for the inability of our library institution to join into a stable network or system arrangement; it is merely one of many aspects that hinder rather than encourage cooperation. Technical solutions have been proposed which are perhaps feasible but cannot be implemented because of the social and political barriers preventing their acceptance. The scholarship of our sociologists and political scientists have only begun to probe into what now can be referred to as the intangible factors governing our social institutions. Most of the work that has been done views only a small segment of the communication process that forms the fabric of national development. There is no other way to begin such study. Very little that has been done can be compared with KOMRML, not because of its inapplicability, but more a matter of lack of information about KOMRML's purposes and accomplishment. Data were collected from KOMRML participating libraries which can be compared with one part of a study done by Olson on interlibrary cooperation.

Olson used 33 general barriers to cooperation identified by Nolting (Mobilizing Total Library Resources for Effective Service. Chicago, American Library Association, 1969) which was distributed as part of a questionnaire to 131 interlibrary organizations.* Each respondent was asked to judge each barrier as a factor against cooperation on a six point scale from strongly agree to strongly disagree with the option to state that the barrier was not operative in KOMRML. The comparative results of the KOMRML responses and those received by Olson are given in Table 10. Obviously, these results can only be classed as "interesting" but hardly data on which to make decisions. The comparative ranking is summarized in Table 11.

Table 11

Comparative Ranking of Barriers to Cooperation

KOMRML Ranking		Olson Study			
		Agreement	1 - 14	15 - 23	24 - 32
1 - 14		6	-	6	2
15 - 23		3	3	-	3
24 - 32		4	5	-	-
	Total	13	8	6	5

* Although 33 barriers were used in the Olson study, only 32 were distributed in KOMRML; one was felt to be nonapplicable to KOMRML.

Table 10

Barriers to Effective Interlibrary Cooperation*

Barrier	Rank*		Average Score*	
	KOMRML Response	Olson** Response	KOMRML Response	Olson** Response
Lack of adequate funds	1	1	2.2	1.7
Cumbersome fiscal practices	2	9	2.6	2.6
Lack of information about true functions of different types of libraries	2	15	2.6	2.7
Lack of properly trained staff	4	4	2.7	2.3
Inadequacy of libraries to serve their own needs	4	15	2.7	2.7
Incompatibility of equipment, procedures and rules between libraries	6	15	2.9	2.7
Failure of small libraries to realize the value of resources of larger libraries	7	24	3.0	2.9
Fear by large libraries of being overused and undercompensated	7	6	3.0	2.5
Unpredictability of demands on the library by its legitimate users	9	31	3.1	3.2
Fear of loss of local automony	9	2	3.1	2.1
Lack of knowledge of needs of users	9	15	3.1	2.7
Lack of contacts with agencies engaged in areawide cooperation	9	19	3.1	2.8
Limitations on access to other academic libraries	9	19	3.1	2.8
Lack of understanding by layman of library needs	9	3	3.1	2.2
Lack of public interest and concern for total library services	15	9	3.2	2.6
Assumption that each library has unique rather than common needs	16	9	3.3	2.6
Thinking of only one type of cooperation	16	9	3.3	2.6
Delays in satisfying needs and requests of users	18	19	3.4	2.8
Mistrust of librarians	18	28	3.4	3.0
Clash of personality	20	19	3.5	2.8
Differences in size of library collections	20	24	3.5	2.9
Distance between libraries and distance of users from the library	22	28	3.7	3.0
Unawareness of successful cooperative efforts in other states	22	19	3.7	2.8
Unwillingness to experiment	24	6	3.8	2.5
Jealousy and stubborness	24	28	3.8	3.0
Large number of institutions providing library services	26	32	3.9	3.6
Lack of appropriate state enabling legislation or institutional authority	26	24	3.9	2.9

(Cont'd)

Barriers to Effective Interlibrary Cooperation* (Cont'd)

Barrier	Rank*		Average Score*	
	KOMRML Response	Olson** Response	KOMRML Response	Olson** Response
Lack of creative administrative leadership	26	9	3.9	2.6
Complacency and self-satisfaction	29	4	4.0	2.3
Custodial mentality of librarians	29	9	4.0	2.6
Institutional competition between libraries	29	31	4.0	3.2
Inertia and indifference	32	6	4.2	2.5

* Ranking of agree - disagree scores are "significant impediments to interlibrary cooperation"; the lower the score, the greater the agreement that the barrier is significant.

** Source, E. E. Olson, Interlibrary Cooperation, Final Report, Project No. 07-1084, Office of Education, Bureau of Research, Sept. 1970.

KOMRML agrees with Olson's respondents in that fiscal problems and the administrative machinations related to them are the major deterents to cooperation. Almost every bureaucracy is convinced that given more money, a better job can be done. On the other hand, it has been an operating philosophy of our nation practiced within and outside our borders that "seed money" is given to cause a realignment of organization. At some point in time no more money is to be dispensed with the expectation that the seed will cause a change to result in self-sufficiency or if it fails to bear fruit, it is abandoned as a failed social experiment. What is equally as interesting is the disagreement about the major barriers. KOMRML respondents apparently feel that it is an innovative group. The human bureaucratic qualities that Olson's respondents felt were important barriers such as inertia, indifference, self-satisfaction, seem of little importance to KOMRML. For KOMRML this is indeed an encouraging indication that it is willing, if not eager, to continue to experiment. On the other hand, almost one-half of what KOMRML respondents ranked as belonging in the first group of barriers, Olson's respondents placed in the second group. Most of these refer to factors relating to institutions and individuals outside the cooperative system. Does this suggest that KOMRML has less confidence to deal with outside pressures than other library systems?

This less than objective opinion confirms observations made from the KOMRML Central Office. Cooperation is obtained on agreed upon procedural matters. Nevertheless, there are conflict situations. They arise because of a lack of knowledge of the activities of other participating libraries which operationally can be observed (i) as undertaking new endeavors without comprehending the impact on the system as a whole and (ii) as a reticence to reveal peculiarities for fear of judgment by others which, in turn, might affect autonomy and recognition of institutional worth separate from the system.

Speculatively, three conclusions might be made from this exercise. First, a great deal of investigation is needed to engage in systems planning and managing. The fact that barriers can be identified and put into a value array is a clue that decisions can be made which can enhance or destroy a system. Second, KOMRML is facing severe financial problems. Some means should be found which can assure stable financing that is compatible with services offered and sufficient to support the separate institutions. Fiscal irresponsibility in a marriage can lead to divorce; a cooperative venture as a library system can not survive with cumbersome and unequal fiscal arrangements. Third, the autonomy and requirements of each participant in the system are a potent force. A systems program must search for elements which either transcend the prerogatives of the separate units and/or are no threat to the continued functioning of the separate units.

Possible areas of KOMRML development

KOMRML can be classified as an academic library consortium. As noted above, the list of cooperative endeavors tried by academic libraries

is an impressive one. Lehman and Purdy have identified areas where co-operative efforts have proven feasible, even if not always long lasting. Each of these areas will be examined as short range and long range programs for KOMRML.

1. Union list of serials. There have been many union serial lists produced, particularly in recent years, because of the relative ease of production and update with the use of computer technology. KOMRML is well on its way to accomplish such a list. The future provides several choices. Updating the list, while not as costly as producing the first list, is nevertheless expensive. How is this cost to be borne? Should KOMRML maintain its own updating center, or should it work toward developing a national center to which all resource libraries report their holdings? Should the regional list be expanded to include other institutions besides participating libraries, for example, the major lending hospitals? Is it possible to ask other academic library units to list their holdings in the KOMRML regional list to permit an extension of scope for locating serials? What complications will arise if KOMRML continues to support its own list with the development of the national serials data bank? Obviously, KOMRML must have some easy access to serial holdings if its document delivery program is to succeed, but once started, more questions can be asked than there are answers.

2. Union book catalogs. As reported last year, KOMRML has made no effort to develop a book catalog after its preliminary investigation early in 1969 because of the cost and because of the statement from NLM that with the completion of the design and testing of MEDLARS II, a national union medical book catalog would become a definite possibility. Certainly, with the experimentation through the SUNY Biomedical Network with NLM the feasibility of such schema should be well understood. It would hardly seem appropriate for KOMRML to engage in such activity separate from a possible national program. KOMRML, however, does have an obligation to propose what it might require of a national biomedical union catalog as well as to investigate how it could provide input to such a national catalog.

3. Bibliographic centers. With the existence of a continuously updated distributed union list of serials and if there were a national union book catalog, there would appear to be no need to consider creating such centers. Other RMLs have chosen to create bibliographic centers. Upon examination such a center might prove useful. The question that would need to be answered is whether KOMRML should create such a center of its own or join with one of the RMLs already engaged in such activity.

4. Cooperative acquisitions. There are two aspects of a central acquisition, (i) the identification of specific titles (or subject areas) and assigning responsibility to a participating library to acquire such material and (ii) the technical process of acquiring material. With the former, a utilitarian appeal seems pre-eminent. While such attitudes have fostered many cooperative acquisitions programs, the monitoring of the

responsibility aspect is difficult to maintain. Nearly all KOMRML participating library's supporting institutions belong to the Center for Research Libraries (CRL). A scientific serials program of long standing already exists. Should KOMRML as a unit relate to this program through its supporting institutions, or can a method be devised to support a separate program? The technical processing aspect is in many respects now being fulfilled by book jobbers. Is there a need to set up a central unit to purchase material for hospital libraries? Simply because of communication and transportation problems involved such a central unit probably cannot be set up for the region as a whole anymore than one book jobber can serve the whole region. The fiscal and jurisdictional uniqueness of biomedical libraries probably make any kind of cooperative acquisitions program unworkable without a better base of establishing mutual and supportive interlibrary responsibilities.

5. Cooperative storage. Again, CRL can serve this function for KOMRML. The only possible area where KOMRML might proceed with cooperation in this area is the consolidation of serial titles, parts of which are held by several libraries. This kind of program has already been discussed by the KOMRML Executive Committee and only awaits the distribution of the union list to determine if a situation prevails in which participating libraries have materials which can be shifted.

6. Cooperative cataloging. Cooperative cataloging has been a national enterprise since LC began distributing its cataloging copy at the turn of the century. While it might be possible for KOMRML to undertake some program in this area, it can only do so with the understanding that it would be competing with national actions of three-fourths of a century of trial and error. Again, it might be possible for a participating library to carry out the technical processing for a group of hospital libraries, but such activity could hardly be provided from a regional central office any better than existing commercial enterprises.

7. Cooperative photographic projects. The University Microfilms is the prime example in this area. All biomedical libraries are facing problems in the preservation of their materials. But a program already exists, and once again KOMRML seems hardly large enough to organize a viable program. Perhaps this might be an area for cooperative acquisitions rather than photographic reproduction.

8. Cooperation with different types of libraries. From the operational report above it can be seen that KOMRML is "serving" a variety of institutions. Obviously, there is a difference between cooperating and providing a service. Further investigative work and leadership for mutual support is on its way. Given time for KOMRML to continue with its present program clearer possibilities for cooperative action will be defined. On the other hand, very little effort has so far been made to search where cooperation might be fruitful across regional boundaries, with public libraries, and with such specialized agencies as CRL. The relationship of KOMRML with NLM has been well documented. Can this be called cooperation?

9. Professional conferring. KOMRML's Executive and Administrative Committees are, if nothing else, a conferring body. All manner of information is relayed at meetings as well as regional decisions. The NLM site visits for grant and operational evaluations also served a consultative function. As already remarked, several of the participating libraries have started formal consultation programs for institutions in their service area. As the network grows and as each of the service areas increases its activity, the Executive Committee can no longer function in this coordinating role. To suggest that an individual be available to relate and to promote the regional library development at all levels is hardly empire building -- the empire is being created, but it could develop into a fragmented, conflicting series of separate programs producing an attitude of destructive competition throughout the region.

10. Surveys. This report should be revealing the fact that KOMRML has been continually studying itself and collecting data for planning and decision making. It should also be evident that a great deal more investigative work of this kind must be forthcoming if we are to deal with the ever growing communication problems that face institutions individually and collectively. Enough problems have been identified to keep a large research organization going. More important, perhaps, is the fact that in general nearly all institutions within the region have demonstrated a willingness to participate in investigative projects.

11. Interlibrary loan. The first part of this report gives the results of KOMRML cooperation to date.

12. Sharing building plans. Six of the 10 participating libraries have within the past year moved into, or are in the process of constructing, new physical facilities. Consultation and sharing of expertise on this level will be minimal in the coming years. An area of construction that will decidedly need a great deal of attention in the coming years is for hospitals, either for building a new facility or renovating an old one. To aid institutions requires expertise that can be supplied through professional conferring and consultation.

13. Computer processing. Medical librarians may wish to believe that they are a formidable force in library adminstration; however, viewing the total library organization of the nation they are but a small group and their institutions, using any of the common library measures, are small. The use of computers on a cooperative basis require standardization of techniques and procedures which no single library can enforce among libraries. Because of the leadership in computer processing by NLM, medical libraries either must follow NLM's leadership or compete with NLM. To compete with NLM with the expectation that it will adopt the work of computer processing a single medical library, or even a region, has a bureaucratic head in the sand quality. The task of changing the large NLM system is too expensive. Individual participating libraries are all

using computer processing for some aspect of their operation, but without sanction and participation by NLM, an RML probably should not engage in such activity beyond its own data processing.

14. Communication networks. KOMRML has proposed, and it is hoped will succeed in establishing in 1971, a TWX network. UK, as noted above, does operate an IN-WATTS line which will be evaluated during the year. To project further sophistication on a regular, or even on an experimental, basis seems beyond the KOMRML base.

15. Standardization. A system or network requires standardization. As one librarian has stated it,

> A system must guard against attacks on the standardization of routines or become vulnerable to delay, to excessive costs, and possibly to disorganization. This injunction against non-conformity in clerical areas should not affect innovation in the area of public services. There are many routines involved in library work that really do not matter to the public or the effectiveness of the library's services. (D. Kaeser, as quoted by Nelson)

KOMRML has barely begun the process of standardization which will be necessary to establish an efficient system which will equalize access to the scholarly record. Once again, such an essential aspect for library cooperation requires the collection of data for decision making.

SUMMARY

The second year of KOMRML has shown that the programs started in 1969 have grown in a way that appear to be consistent with the general purposes of the legislation -- more institutions have been included within the "system" and more documents delivered. More work needs to be done on the standardization of procedures although a great deal has already been accomplished.

If the concept is accepted that interlibrary dependence must increase for an institutional means to be developed to increase access to the scholarly record, the studies on library systems and library cooperation published to date are diffuse and of little use for KOMRML evaluation. Methodologic approaches have been tested, but data for planning and managing library systems such as KOMRML are conflicting. The only choice appears for KOMRML to engage in continuous productive investigation.

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APPENDIX

The following tables correspond to the same table numbers in KOMRML Papers and Reports No. 5.

No tables were prepared corresponding to Tables 1, 4, and 7 of KOMRML Papers and Reports No. 5, and are therefore lacking in this appendix.

Figure 1

KENTUCKY OHIO MICHIGAN
REGIONAL MEDICAL LIBRARY

PARTICIPATING LIBRARIES

CASE WESTERN RESERVE UNIVERSITY
CLEVELAND HEALTH SCIENCES LIBRARY

MEDICAL COLLEGE OF OHIO AT TOLEDO
MEDICAL LIBRARY

UNIVERSITY OF LOUISVILLE
KORNHAUSER HEALTH SCIENCES LIBRARY

UNIVERSITY OF DETROIT
SCHOOL OF DENTISTRY LIBRARY

MICHIGAN STATE UNIVERSITY
SCIENCE LIBRARY

OHIO STATE UNIVERSITY
HEALTH CENTER LIBRARY

UNIVERSITY OF CINCINNATI
MEDICAL CENTER LIBRARIES

UNIVERSITY OF KENTUCKY
MEDICAL CENTER LIBRARY

UNIVERSITY OF MICHIGAN
HEALTH SCIENCE LIBRARIES

WAYNE STATE UNIVERSITY
MEDICAL LIBRARY

CENTRAL OFFICES:
WAYNE STATE UNIVERSITY
MEDICAL LIBRARY
645 MULLETT STREET
DETROIT, MICHIGAN 48226

PHONE: 313 - 577-1091
TWX: 810 - 221-5163

Dear Librarian:

The records at the KOMRML Central Office show that you requested _____ interlibrary loans from the participating library responsible for regional medical library service in your geographic area.

Part of the processing cost of filling some of these requests may have been borne by the Public Health service grant to KOMRML. Of the _____ unfilled requests, _____ were referred to other KOMRML participating libraries or the National Library of Medicine. All the costs for processing these referral requests were paid for from federal sources.

Sincerely,

Vern M. Pings
Director

Table 2

Requests Received by Participating Libraries during 1970 from Different User Groups

User Groups		Totals	WSU	MSU	UM	UD	OSU	CHSL	UC	MCOT	UK	UL
Hospitals	Requests Rec'd	34,150	11692	1434	576	161	1991	10213	1984	865	3370	1864
	Filled	26,934	9468	1128	509	143	1423	7682	1379	489	3003	1710
	Unfilled	7,216	2224	306	67	18	568	2531	605	376	367	154
	Referred	3,685	1268	290	57	13	480	532	374	373	191	107
Industry/ Commerce	Requests Rec'd	5,439	1459	835	1649	63	85	351	683	12	7	295
	Filled	3,908	1191	516	1154	63	35	304	403	5	7	230
	Unfilled	1,531	268	319	495	--	50	47	280	7	--	65
	Referred	1,165	147	250	409	--	11	13	280	3	--	52
Government Organizations	Requests Rec'd	2,359	110	491	17	--	92	149	641	1	328	530
	Filled	1,640	85	338	14	--	87	125	335	1	291	364
	Unfilled	719	25	153	3	--	5	24	306	--	37	166
	Referred	603	5	149	2	--	4	4	282	--	25	132
Educational Organizations	Requests Rec'd	4,720	449	459	722	33	597	497	897	624	164	278
	Filled	3,120	299	379	652	16	457	376	421	138	146	236
	Unfilled	1,600	150	80	70	17	140	121	476	486	18	42
	Referred	1,205	23	54	58	10	84	52	422	480	4	18
Foundations	Requests Rec'd	1,104	348	6	--	--	750	--	--	--	--	--
	Filled	809	282	4	--	--	523	--	--	--	--	--
	Unfilled	295	66	2	--	--	227	--	--	--	--	--
	Referred	221	34	2	--	--	185	--	--	--	--	--
Public Library/ Museums	Requests Rec'd	209	39	23	6	1	73	19	--	18	22	8
	Filled	151	27	15	6	--	59	13	--	12	15	4
	Unfilled	58	12	8	--	1	14	6	--	6	7	4
	Referred	19	1	3	--	--	3	4	--	4	2	2
Professional Societies	Requests Rec'd	328	52	--	--	--	130	--	--	146	--	--
	Filled	187	49	--	--	--	104	--	--	34	--	--
	Unfilled	141	3	--	--	--	26	--	--	112	--	--
	Referred	118	--	--	--	--	6	--	--	112	--	--

Table 2 (con't)

User Groups		Totals	WSU	MSU	UM	UD	OSU	CHSL	UC	MCOT	UK	UL
Individuals KOM	Requests Rec'd	1,455	139	2	--	13	28	--	--	49	1221	3
	Filled	1,407	123	1	--	12	28	--	--	47	1193	3
	Unfilled	48	16	1	--	1	--	--	--	2	28	--
	Referred	25	1	--	--	1	--	--	--	2	21	--
Outside KOM	Requests Rec'd	1,550	190	1	412	1	369	103	--	5	372	97
	Filled	1,247	137	1	411	--	279	70	--	2	275	72
	Unfilled	303	53	--	1	1	162	33	--	3	97	25
	Referred	4	4	--	--	--	--	--	--	--	--	--
Outside U.S.A.	Requests Rec'd	297	74	--	127	1	69	10	--	--	14	2
	Filled	260	57	--	127	1	55	8	--	--	10	2
	Unfilled	37	17	--	--	--	14	2	--	--	4	--
	Referred	--	--	--	--	--	--	--	--	--	--	--
Participating Libraries	Requests Rec'd	11,948	4486	1203	2023	90	1177	253	81	3	1728	904
	Filled	9,160	3585	958	1662	74	778	175	44	--	1316	568
	Unfilled	2,788	901	245	361	16	399	78	37	3	412	336
	Referred	1,914	524	206	280	15	343	53	30	3	254	206
Grand Totals	Requests Rec'd	63,559	19038	4454	5532	363	5361	11595	4286	1723	7226	3981
	Filled	48,823	15303	3340	4535	309	3828	8753	2582	728	6256	3189
	Unfilled	14,736	3735	1114	997	54	1533	2842	1704	995	970	792
	Referred	8,959	2007	954	806	39	1116	658	1388	977	497	517

Table 3

Summary Activity of KOMRML Interlibrary Loan
Requests in 1970 by Different User Groups

	No. of Institutions By Type	% of Total Institutions	No. of Requests Received	% of Total Requests Rec'd	No. of Requests Filled	% of Total Requests Rec'd	No. of Requests Referred	% of Total Requests Rec'd	No. of Requests Returned/Rejected	% of Total Requests Rec'd
Hospitals	252	46.0	34,150	53.9	26,934	42.3	3,685	5.8	3,531	5.6
Industry/Commerce	94	17.1	5,439	8.6	3,908	6.1	1,165	1.8	366	.6
Government Org.	34	6.2	2,359	3.7	1,640	2.6	603	.9	116	.1
Educational Org.	125	22.8	4,720	7.4	3,120	4.9	1,205	1.9	395	.6
Foundations	6	.1	1,104	1.7	809	1.2	221	.3	74	>.1
Public Libraries/ Museums	33	6.2	209	.3	151	.2	19	>.1	39	>.1
Professional Soc.	3	.1	328	.5	187	.3	118	.1	23	>.1
Individuals in KOM	NA		1,455	2.3	1,407	2.2	25	>.1	23	>.1
Institutions/Individuals Outside Region 5	NA		1,550	2.4	1,247	1.9	4	>.1	299	.5
Institutions/Individuals Outside U.S.	NA		297	.4	260	.4	--	--	37	>.1
Participating Libraries	NA		11,948	18.8	9,160	14.7	1,914	3.0	NA	--

Table 5

ILL transactions received and sent among participating libraries
1970

	Wayne State University	Michigan State University	University of Detroit	University of Michigan	Cleveland Health Sciences Library	Medical College of Ohio at Toledo	Ohio State University	University of Cincinnati	University of Louisville	University of Kentucky	Totals
Wayne State University	--	330	161	585	331	1851	551	293	122	265	4489
Michigan State University	377	--	28	92	106	279	242	6	17	56	1203
University of Detroit	5	3	--	11	9	2	42	1	6	11	90
University of Michigan	622	561	33	--	146	87	198	111	63	202	2023
Cleveland Health Sciences Library	149	6	1	30	--	25	29	4	7	2	253
Medical College of Ohio at Toledo	1	--	--	--	1	--	--	--	--	1	3
Ohio State University	96	105	7	90	183	436	--	115	115	31	1178
University of Cincinnati	--	--	--	1	7	--	8	--	3	60	79
University of Louisville	58	6	26	10	80	10	130	17	--	567	904
University of Kentucky	149	52	4	56	175	9	319	669	293	--	1726
Totals	1457	1063	260	875	1038	2696	1519	1216	626	1195	11948
Referred Twice	524RR	206RR	15RR	280RR	53RR	3RR	343RR	30RR	206RR	254RR	1914

Rows indicate referrals processed by institution at left; columns indicate referrals made by institution at head of column to institution at left.

Table 6

Reasons Participating Libraries were unable to fill interlibrary loan transactions

Reasons Not Filled	No. of Transactions Unfilled		% of Transactions Unfilled	
	1969	1970	1969	1970
1. In Circulation	609	688	5.8	4.8
2. Bindery	1007	1093	9.6	7.6
3. Reference/Reserve	151	205	1.4	1.4
4. Title Not Owned	4704		44.9	
5. Issue Not Owned	6512 — 387	9493	3.7	66.0
6. Volume Not Owned	1421		13.6	
7. Missing	912	1013	8.7	7.0
8. Cannot Verify	368	226	3.5	1.5
9. Not Received	419	773	4.0	5.4
10. Other	492	895	4.7	6.2
Total	10,470	14,386*		

*All libraries do not give reasons so that reasons do not balance with unfilled.

Table 8

KOMRML Financial Report, January - December, 1970

Type of Expense		University of Kentucky	University of Louisville	University of Cincinnati	Ohio State University	Cleveland Health Sciences Library	Medical College of Toledo at Ohio	Wayne State University	University of Michigan	Michigan State University	University of Detroit	Totals
Travel Reimbursements	Exec.	401.71	693.44	378.76	460.51	264.81	437.41	1834.99	218.90	315.63	--	5006.16
	*S. P.	658.37	24.00	59.75	22.40	124.51	216.32	112.85	--	136.56	--	1354.76
Personnel Costs												
Librarians		195.00	213.00	210.00	159.00	130.50	--	25019.04	852.00	--	147.00	26,925.54
	S. P.	9562.79	--	--	--	--	--	--	--	--	--	9562.79
Secretaries & Clerical		22.70	--	552.50	97.52	207.22	--	14967.49	702.65	113.75	91.00	16,754.83
		--	--	--	--	--	--	5317.71	--	--	--	5317.71
Staff Benefits	S. P.	358.71	--	--	--	--	--	--	--	--	--	358.71
Referral Charges		13045.70	4352.90	2838.55	6784.70	2945.35	2335.55	--	6882.80	6225.05	565.95	45,976.55
		--	--	--	--	--	--	1334.72	--	--	--	1334.72
Supplies	S. P.	297.04	--	--	--	--	--		--	--	--	297.04
	Equip. Rental	--	--	--	--	--	--	306.00	--	--	--	306.00
Furniture and Capital Outlay	S.P.	447.07	--	--	--	--	--	--	--	--	--	447.07
Communication (TWX - Phone)		--	--	--	--	--	--	347.79	--	--	--	347.79
	S.P.	447.07	--	--	--	--	--	--	--	--	--	447.07
		--	--	--	--	--	--	48.14	--	--	--	48.14
Computing Center Charges	S.P.	5145.85	--	--	--	--	--	--	--	--	--	5145.85
		33.60	44.25	5.00	15.20	102.83	--	2564.33	75.90	--	15.90	2857.01
Misc. (non-service costs)	S.P.	3000.00	--	--	--	--	--	--	--	--	--	3000.00
Serials Project - Titles		--	181.61	197.08	373.23	480.61	--	--	--	479.44	117.39	1829.36
Participating Libraries Totals		33615.61	5509.20	4241.64	7912.56	4255.83	2989.28	51853.06	8732.25	7270.43	937.24	127,317.10
Total												127,317.10

*S.P. - Costs incurred for Serials List Project.

OCR

Table 9*

Referrals made by Participating Libraries for Types of Institutions in 1970

User Groups	WSU	MSU	UD	UM	CHSL	MCOT	OSU	UC	UL	UK	TOTALS
Hospitals	1268	290	13	57	532	373	480	374	107	191	3685
Industry/Commerce	147	250	--	409	13	3	11	280	52	--	1165
Government Organizations	5	149	--	2	4	--	4	282	132	25	603
Educational Organizations	23	54	10	58	52	480	84	422	18	4	1205
Foundations	34	2	--	--	--	--	185	--	--	--	221
Public Libraries/ Museums	1	3	--	--	4	4	3	--	2	2	19
Professional Societies	--	--	--	--	--	112	6	--	--	--	118
Individuals	1	--	1	--	--	2	--	--	--	21	25
TOTALS	1479	748	24	526	605	974	773	1358	311	243	7041
Referrals for RMLs	4	--	--	--	--	--	--	--	--	--	4
Referrals for Other PLs	524	206	15	280	53	3	343	30	206	254	1914
GRAND TOTALS	2007	954	39	806	658	977	1116	1388	517	497	8959

*This table is a version of the unnumbered table on page 33 of KOMRML Papers & Reports No. 5, published in 1969.

Table 10

Reasons behind unfilled interlibrary loans
at each participating library in percentages

	WSU	MSU	UD*	UM	CHSL	MCOT	OSU	UC	UK	UL
Not Owned	58.5	77.6	--	51.9	46.8	98.7	65.1	91.1	56.4	72.0
Missing	8.8	4.8	--	6.8	6.1	--	8.5	1.2	19.1	2.5
Bindery	13.3	4.4	--	9.4	6.5	--	8.6	2.3	7.1	1.8
Not Rec'd	8.7	5.7	--	14.9	2.5	--	6.1	.8	5.5	1.8
Not Verif.	.9	2.2	--	.8	4.1	--	1.5	--	.7	--
Ref./Res.	1.2	.7	--	.9	3.5	--	1.5	--	1.2	.1
Circ.	2.1	1.6	--	6.0	13.9	--	3.9	.9	4.8	.5
Other	5.3	1.0	--	5.2	11.0	--	1.5	--	.3	19.5

*No reasons given

Table II

Number of Items Borrowed and Lent by Institutions
Other than Participating Libraries
Which Borrowed more than 250 Items in 1970

Name of Institution	No. of Items Borrowed 1969		1970		No. of Items Lent 1970	
WSU Service Area						
Children's Hospital of Michigan	891		807		275	
Crittenton Hospital of Detroit	21		397		-	
Detroit Osteopathic Hospital	999		507		30	
Grace Hospital	452		301		657	
Harper Hospital	679		419		1718	
Henry Ford Hospital	1133		837		326	
Hutzel Hospital	529		543		75	
Lafayette Clinic	1119		1304		241	
Michigan Cancer Foundation	126		302		3	
Michigan Epilepsy Center	497		300		-	
Mt. Carmel Hospital	648		472		51	
Oakwood Hospital	660		376		135	
Parke-Davis & Company	624		453		8	
Providence Hospital	388		419		35	
St. John Hospital	497		535		124	
Sinai Hospital	649		834		828	
Wm. Beaumont Hospital	894		851		618	
Subtotal		10806		9657		5124
MSU Service Area						
Gerber Products Company	247		471		-	
Mich. State Dept. of Health	-		441		-	
Subtotal		247		912		-
UM Service Area						
Parke-Davis & Company	762		925		30	
Upjohn Company	486		520		225	
Western Michigan University	90		472		650	
Subtotal		1338		1937		905
MCOT Service Area						
Bowling Green State University	401		499		340	
Maumee Valley Hospital	1		595		100	
Subtotal		402		1094		440
CHSL Service Area						
Children's Hospital of Akron	252		568		58	
Cleveland Clinic Foundation	1668		1514		175	
Cleveland Met. General Hospital	1269		1230		60	
Fairview General Hospital	384		602		-	
Huron Road Hospital	494		388		6	
Lakewood Hospital	243		286		-	
Mt.Sinai Hospital	1192		1189		20	
St. Elizabeth Hosp.(Youngstown)	148		410		50	
St. Luke's Hospital	694		568		3	
VA Hospital (Wade Park)	1118		1535		15	
Subtotal		7462		8290		387

(Cont'd)

Table 11 (Cont'd)

Name of Institution	No. of Items Borrowed 1969		1970		No. of Items Lent 1970	
OSU Service Area						
Battelle Memorial Institute	231		544		867	
Kettering Memorial Hospital	157		410		63	
Miami Valley Hospital	187		278		159	
Subtotal		575		1232		1089
UC Service Area						
Children's Hospital (Cincinnati)	325		1011		20	
Kettering Laboratory	127		511		200	
VA Hospital	252		322		75	
William S. Merril Company	129		381		84	
Subtotal		833		2225		379
UL Service Area						
Louisville General Hospital	156		746		40	
Subtotal		156		746		40
UK Service Area						
Hopkins County Hospital	85		609		5	
U.S.P.H.S. Hospital - Clinic	260		313		157	
VA Hospital (Lexington)	376		385		97	
Subtotal		721		1307		259
Total		22540		27400		8623